Coating Science and Technology Tutorials Offered by Cal Poly San Luis Obispo Professors

October 17, 2021
Paris Las Vegas, venue of Western Coatings Show and Symposium

Rheology   *VOCs*   *Machine Learning*

Don't Gamble with Rheology: It can hurt your cash flow! [Dr. Ray Fernando]

10:00 – 11:30 AM

During early stages of new product development, formulators typically focus on service life performance while paying little to no attention to rheology. This oversight often leads to rheological problem solving at pilot or even production trial stage, causing unexpected product development cost increases and product launch delays. This tutorial will provide examples of above scenario and teach essential rheological concepts needed to optimize rheology during early stages of new coating product development.

Dr. Ray Fernando is Arthur C. Edwards Endowed Chair in Coatings Technology and Ecology at Chemistry and Biochemistry Department, Cal Poly SLO since 2002. He is also the director of Cal Poly's Kenneth N Edwards Western Coatings Technology Center. Ray has 15-years of industrial experience (3-years at Air Products and Chemicals & 12-years at Armstrong World Industries). He received the American Coatings Association's Joseph J Mattiello Award in 2018 and American Chemical Society's Roy W Tess Award in 2019.

VOCs – How did we get here and where are we going? [Dr. Dane Jones]

12:00 – 1:30 PM

Over the last thirty years, no area of coatings technology has undergone a greater change than VOC content. We examine the reasons for the change, regulatory issues, modifications in formulations, and methods developed for analysis of VOCs. Waterborne systems will be emphasized but all types of coatings will be considered, including solventborne 1K and 2K, powder coatings, and radiation cured coatings.

Dr. Dane Jones is an Emeritus Professor of Chemistry at Cal Poly, SLO. He has worked on development of VOC analysis methods for many types of coatings and serves as a consultant to several polymers and coatings manufacturers. He is the recipient of Cal Poly's Distinguished Teacher Award, the Los Angeles Coating Society's Distinguished Service Award, the Western Coatings Societies' Samson-Adler Distinguished Service Award, and the American Coatings Association Industry Excellence Award.

Viva Las Variables: Machine Learning in the Coatings Laboratory [Dr. Erik Sapper]

2:00 – 3:30 PM

Artificial intelligence and machine learning applications are making impacts in diverse fields and industries around the world. This tutorial will introduce attendees to new ways of approaching formulation science which augments traditional thinking with artificial intelligence (AI) and machine learning (ML) tactics and strategies. Strategies for implementing AI/ML workflows in the laboratory will be discussed, as well as approaches for handling unstructured, textual data. No prior mathematical or computational background is expected of attendees.

Dr. Erik Sapper is an Assistant Professor at California Polytechnic State University, where he and a team of undergraduate and graduate students perform research in the Kenneth N. Edwards Western Coatings Technology Center. Erik's research focuses on the autonomous and computationally driven discovery and design of new materials for coatings applications, especially at the intersection of polymer design, formulation, and coating service life prediction.

Registration fee: one tutorial - $200; two tutorials - $375; all three tutorials - $500

Register at: www.lasct.org/product/cal-poly-wcs-tutorial/

Questions?
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